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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/533,554	03/22/2000	Yoshio Sato	OPS CASE 489	8275

7590 06/18/2002

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EXAMINER

PEREZ, GUILLERMO

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/533,554

Applicant(s)

SATO, YOSHIO

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,12-15 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 and 20 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on March 18, 2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U. S. Pat. 6,223,971 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Specification

The disclosure is objected to because of the following informalities: page 8, lines 8 and 9 recite "s" instead of ---as---; and also recite "ahs" instead of ---has---;

page 9, line 26 recite "ahs" instead of ---has---;

page 11, line 4 recite "transmitting the of" instead of ---transmitting the force (or torque) of---;

page 12, line 18 recite "h0latch" and "LE" which need correction and clarification, respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Obara KK (JP 07-290251) in view of Fukaya et al. (U. S. Pat. 4,751,411)
and further in view of Kumatani et al. (U. S. Pat. 4,689,509).

Obara KK discloses a driving unit of a welding equipment provided with a force application shaft that is driven by a motor (1), comprising:

- a screw shaft (9) coaxially fixed with a rotary shaft (5) of the motor (1);
- a nut (7) fixed with the force application shaft (9) and threadably engaged with a screw of the screw shaft (9);

a rotary force output from the rotary shaft (5) of the motor (1) is converted into a reciprocating motion of the force application shaft (9) which in turn applies a force to the welding equipment (10).

However, Obara KK does not disclose a stabilizing mechanism engaging the force application shaft to prevent rotation thereof. Obara KK does not disclose an elastic body disposed on the axis of the force application shaft through which the force exerts. Obara KK does not disclose an electromagnetic brake disposed on the rotary shaft of the motor.

Fukaya et al. disclose a stabilizing mechanism (13) engaging the force application shaft (7) to prevent rotation thereof. Fukaya et al. disclose an elastic body (9) disposed on the axis of the force application shaft (7) through which the force exerts. The invention of Fukaya et al. has the purpose of reducing the size of the embodiment and facilitating the manufacturing process.

Kumatani et al. disclose an electromagnetic brake (42) disposed on the rotary shaft (26) of the motor. The invention of Kumatani et al. has the purpose of controlling the rotational movement of the driving body and the rotor.

It would have been obvious at the time the invention was made to modify the driving unit of Obara KK and provide it with the stabilizing mechanism, the elastic body, and the electromagnetic break disclosed by Fukaya et al. and Kumatani et al. for the purpose of reducing the size of the embodiment, facilitating the manufacturing process, and controlling the rotational movement of the driving body and the rotor.

2. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obara KK in view of Fukaya et al.

Obara KK discloses a driving unit of a welding equipment provided with a force application shaft that is driven by a motor (1), comprising:

- a screw shaft (9) coaxially fixed with a rotary shaft (5) of the motor (1);
- a nut (7) fixed with the force application shaft (9) and threadably engaged with a screw of the screw shaft (9);
- a rotary force output from the rotary shaft (5) of the motor (1) is converted into a reciprocating motion of the force application shaft (9) which in turn applies a force to the welding equipment (10); and
- wherein the screw shaft (9) is substantially integrally provided on the rotary shaft (5) of the motor by boring a closed bore hole at an output side of the rotary shaft (5) of the motor (1), and inserting one end of the screw shaft (9) into the closed bore hole.

Obara KK discloses that the screw shaft (9) is substantially integrally provided on the rotary shaft (5) of the motor by rendering the rotary shaft (5) of the motor (1) hollow to form a hollow portion and having the screw shaft (9) penetrate the hollow portion to fix the screw shaft (9) to the hollow portion.

Fukaya et al. disclose a stabilizing mechanism (13) engaging the force application shaft (7) to prevent rotation thereof. Fukaya et al. disclose that an outer diameter of the nut (33 in figure 1) being the same as or smaller than an outer diameter of the force application shaft (to the left of shaft 35). Fukaya et al. disclose that the screw shaft (7) being substantially integrally provided on the rotary shaft (12) by fixing the screw shaft (7) to the rotary shaft (12) of the motor utilizing a friction force (column 2, lines 33-36). The invention of Fukaya et al. has the purpose of reducing the size of the embodiment and facilitating the manufacturing process.

It would have been obvious at the time the invention was made to modify the driving unit of Obara KK and provide it with the stabilizing mechanism, nut configuration, and the screw shaft-motor shaft configuration disclosed by Fukaya et al. for the purpose of reducing the size of the embodiment and facilitating the manufacturing process.

Allowable Subject Matter

Claims 12-15 and 20 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-5 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
June 12, 2002


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